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EXAMINER	
NGUYEN, STEVEN H D	
ART UNIT	**PAPER NUMBER**
2473	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/037,669	FEUERSTRAETER ET AL.	
	Examiner	Art Unit	
	Steven HD Nguyen	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *59-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *59-70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 59-68 rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of Lee.

As claims 59-61 and 64-66, Williams discloses an apparatus, comprising logic to determine, based on data received from a first linked device, whether to apply flow control to an Ethernet link in accordance with either (1) a Xon/Xoff protocol that enables/disables a Ethernet communication link or (2) a priority based flow control protocol that selectively enables/disables transmission of Ethernet frames based on a priority level; if it is determined to apply the priority based flow control protocol that selectively enables/disables transmission of Ethernet frames to the first linked device based on the priority level (Figs 3-4 which is a pause frame of legacy protocol and new protocol for flow control in the Ethernet network based on the congest level of the priority queue, Fig 6); receive a single Ethernet control frame from the first linked device, the single received Ethernet control frame comprising data identifying the received Ethernet frame as a control frame, data identifying priority level of Ethernet traffic to apply flow control to, and data identifying at least one time duration to apply flow control to the identified priority level of Ethernet traffic (Fig 4 which is control frame

which used to apply a flow control to the traffic based on the parameter and priority and Fig 5, Ref 550); and in response to the received Ethernet control frame from the linked device, ceasing transmission of Ethernet frames associated with the priority level identified by the received Ethernet control frame for a time period based on the data identifying at least one time duration to apply flow control to the identified priority level of Ethernet traffic included in the received Ethernet control frame (Fig 5, Ref 560); and automatically resuming transmission of Ethernet frames associated with the priority level identified by the received Ethernet control frame after a time period based on the data identifying at least one time duration to apply flow control to the identified priority level of Ethernet traffic included in the received Ethernet control frame (Fig 5, Ref 570 for resuming transmission after a duration); determine priority level of Ethernet traffic for a second linked device to apply flow control to; and constructing and transmitting a single Ethernet control frame to the second linked device, the single transmitted Ethernet control frame comprising data identifying the transmitted Ethernet frame as a control frame, data identifying priority level of Ethernet traffic to apply flow control to at the second linked device, and data identifying at least one time duration for the second linked device to apply flow control to the priority level of Ethernet traffic identified by the transmitted Ethernet control frame (Fig 4 discloses a system for detecting a congestion, generating a pause message for transmitting to the sender, wherein the message includes a priority level and a duration. The senders stops at least some traffics according to the indication in the message and resuming the transmission after the duration or receiving another pause frame with the value of duration being zero and Fig

3 is pause frame for legacy protocol and Fig 4 is pause frame for modifying protocol). However, Williams does not disclose a multiple priority levels. In the same of endeavor, Lee discloses a pause frame which includes the multiple priority levels that sender must apply the flow control to by access data identifying multiple priority levels to apply flow control to for different linked devices (See col. 5, lines 62 to col. 6, lines 8) and wherein multiple priority levels correspond different ones of multiple transmission queues to enqueue egress Ethernet frames (Fig 2, 7-8 and col. 5, lines 62 to col. 6, lines 8 discloses a priority levels correspond different ones of multiple transmission/receive queues to store the frames).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for feedback the priority levels in the pause frame as disclosed by Lee into the teaching of Williams. The motivation would have been to prevent data loss.

As claims 62-63 and 67-68, Williams discloses an apparatus comprising logic to monitor multiple receive queues to enqueue received Ethernet frames having respective priority levels associated with respective ones of the multiple receive queues (Fig 6 is used to monitor if the queues are in congestion or not); based on the monitoring, determine a priority level of Ethernet traffic from a linked device to apply flow control to (Fig 5, Ref 530); and constructing and transmitting a single Ethernet control frame to the linked device (Fig 5, Ref 540), the single Ethernet control frame comprising data identifying the Ethernet frame as a control frame, data identifying a priority level of Ethernet traffic to apply flow control to, and data identifying at least one time duration for

the second device to apply flow control to the priority level of Ethernet traffic identified by the Ethernet control frame (Fig 4). However, Williams does not disclose a multiple priority levels. In the same of endeavor, Lee discloses a pause frame which includes the multiple priority levels that sender must apply the flow control to by access data identifying multiple priority levels to apply flow control to for different linked devices (See col. 5, lines 62 to col. 6, lines 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for feedback the priority levels in the pause frame as disclosed by Lee into the teaching of Williams. The motivation would have been to prevent data loss.

3. Claims 69-70 rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Williams as applied to claim 67 above, and further in view of Sorber (US 6018515).

As claim 69, Lee and Williams disclose comparing a threshold associated with a one of the multiple receive queues with an amount of content occupying the one of the multiple receive queues (Fig 4 of William and Fig 2 of Lee). However, Lee and Williams fail to disclose the multiple receive queues comprise receive queues having at least two different sizes, wherein a first one of the multiple receive queues associated with a first one of the multiple priority levels of Ethernet traffic has a larger size than a second of the multiple receive queues associated with a second one of the multiple priority levels; and wherein the second one of the multiple priority levels is a lesser priority level than the first one of the multiple priority levels. In the same field of endeavor, Sorber discloses the multiple receive queues comprise receive queues having at least two

different sizes, wherein a first one of the multiple receive queues associated with a first one of the multiple priority levels of Ethernet traffic has a larger size than a second of the multiple receive queues associated with a second one of the multiple priority levels; and wherein the second one of the multiple priority levels is a lesser priority level than the first one of the multiple priority levels (Fig 5 and col. 8:18-51 discloses each queue associated with a different queue size and priority and the high priority has queue size greater than the low priority).

Since, a method and system for comparing the occupied queue length with threshold is well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for using a different queue size for the queue that associated with priority wherein the high priority has largest queue size than lower priority as disclosed by Sorber into the teaching of Lee and Williams.

As claim 70, Williams and Lee fail to disclose each of the multiple receive queues is associated with a respective threshold, wherein the thresholds are different for at least two of the multiple receive queues. In the same field of endeavor, Rudin discloses each of the multiple receive queues is associated with a respective threshold, wherein the thresholds are different for at least two of the multiple receive queues (Fig 5 and col. 8:18-51 discloses each queue associated with a different queue size and priority and the high priority has queue size greater than the low priority and each queue has a plurality of threshold such as congested, full and recovery).

Since, a method and system for configuring different threshold for each queue is well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and system for implementing a different threshold for each queue as disclosed by Sorber into the teaching of Lee and Williams.

Response to Arguments

4. Applicant's arguments filed 11/19/2009 have been fully considered but they are not persuasive.

5. In response to page 2, the applicant states that Lee teaches away from Williams. In reply, Williams discloses a method and system for performing a priority based flow control which is a modifying version of standard flow control by applying a priority field into the pause frame. Lee discloses the use of pause message for conveying the feed back values such as priority levels which a node need to perform a flow control. The examiner only uses this teaching to apply into the teaching of Williams. Therefore, Lee does not teach away from the teaching of Williams because the examiner does not use the pause frame of Lee to replace the pause frame of Williams. The examiner only inserts the values of Lee into the priority field of Williams.

Response to Arguments

6. Applicant's arguments with respect to claims 69-70 have been considered but are moot in view of the new ground(s) of rejection. This action is made final based on the response of 4/27/2009, 9/21/2009 and 11/19/2009.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yao Kwang can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven HD Nguyen/
Primary Examiner, Art Unit 2473